

# Python: module eof.eof1

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[/pcmdi/halliday1/cdat-4.0/lib/python2.4/site-packages/rs\\_dir/eof/eof1.py](#)

## Modules

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## Classes

[Eof](#)

class *Eof*

```
Eof(v1=None, v2=None,  
      number_of_components=4,  
      latweight_choice='default',  
      mean_choice='default'  
      )
```

Create Eof analyzer; if v1 and optionally v2 are given, calls analyze(v1, v2, number\_of\_components) as well.

Calling method 'analyze' sets attributes:

```
percent_explained  
eigenvectors  
principal_components (a list)
```

Choices for mean correction:

```
'none' -> use data as-is  
'default' -> subtract the time-mean of the data.
```

Choices of latitude weights:

```
'none' -> use data as-is  
'area' -> use latitude weights directly  
'default' -> use sqrt(latitude)
```

Methods defined here:

```
__init__(self, v1=None, v2=None, number_of_components=4,  
         latweight_choice='default', mean_choice='default')
```

```
analyze(self, v1, v2=None)
```

analyze(v1, v2=None)  
Calculates EOF principal components.  
Sets the following attributes:  
    'principal\_components'  
    'eigenvectors'  
    'percent\_explained'

**latweight\_choice**(self)  
The current latitude weighting choice.

**mean\_choice**(self)  
The current value of the mean correction choice.

**number\_of\_components**(self)  
The number of components that will be calculated.

**set\_latweight\_choice**(self, choice)  
Set choice of latitude weights:  
    'none' -> use data as-is  
    'area' -> use latitude weights directly  
    'default' -> use sqrt(latitude)

**set\_mean\_choice**(self, choice)  
Set choice for mean correction:  
    'none' -> use data as-is  
    'default' -> subtract the time-mean of the data.

**set\_number\_of\_components**(self, n)  
set number of components(n), n > 0